

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 July 2003 (31.07.2003)

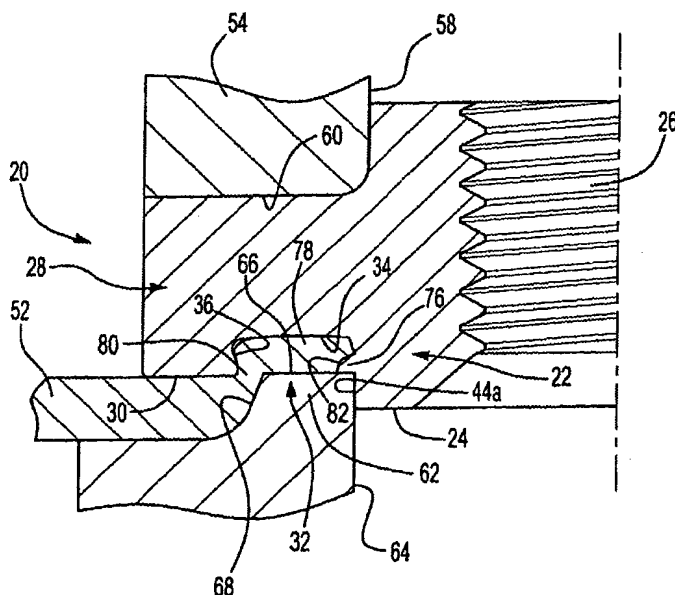
PCT

(10) International Publication Number
WO 03/062651 A1

- (51) International Patent Classification⁷: **F16B 37/06**
- (21) International Application Number: PCT/US02/40278
- (22) International Filing Date:
16 December 2002 (16.12.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/350,641 22 January 2002 (22.01.2002) US
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: SELF-PIERCING FEMALE FASTENER, METHOD OF FORMING A SEALED FEMALE FASTENER AND PANEL ASSEMBLY AND PANEL ASSEMBLY



(57) Abstract: Method of forming a sealed joint between a nut (20) having a cylindrical pilot (22), an annular flange portion (28) surrounding the pilot and an re-entrant groove (32) and a panel with a die having an annular lip (62) which deforms a panel portion into the groove (32) and simultaneously shaves an outer surface of the pilot onto the panel. The annular groove in the flange portion includes an arcuately inclined outer side wall (36) and an inner side wall (38) arcuately inclined toward the flange portion.